

WHAT IS CLAIMED IS:

1. A blood flow measuring apparatus comprising:
irradiation means for irradiating a vessel on an
eye fundus with a laser light;

5 light receiving means for receiving a reflected
light of said laser light; and

calculation means for starting the calculation of
an optimum gain for said light receiving means in
synchronization with the start of irradiation by said
10 irradiation means.

2. A blood flow measuring apparatus according to
claim 1, comprising gain setting means for setting the
gain of said light receiving means based on said
15 optimum gain.

3. A blood flow measuring apparatus according to
claim 2, comprising monitoring means for monitoring the
gain of said light receiving means.

20 4. A blood flow measuring apparatus according to
claim 3, wherein said calculation means is adapted to
terminate, by said monitoring means, the calculation of
the optimum gain in synchronization with the completion
25 of setting of the optimum gain.

5. A blood flow measuring apparatus according to
claim 2, further comprising calculation means for

terminating the calculation of the optimum gain for said light receiving means in synchronization with the termination of irradiation by said irradiation means.

- 5 6. A blood flow measuring apparatus comprising:
 tracking means for tracking a vessel image on an
 eye fundus;
 light receiving means for receiving light from the
 vessel; and
10 calculation means for starting calculation of an
 optimum gain for said light receiving means in
 synchronization with the start of tracking.

7. A blood flow measuring apparatus according to
15 claim 6, further comprising gain setting means for
 setting the gain of said light receiving means based on
 said optimum gain.

8. A blood flow measuring apparatus according to
20 claim 7, further comprising monitoring means for
 monitoring the gain of said light receiving means.

9. A blood flow measuring apparatus according to
 claim 8, wherein said calculation means is adapted to
25 terminate, by said monitoring means, the calculation of
 the optimum gain in synchronization with the completion
 of setting of the optimum gain.

10. A blood flow measuring apparatus according to claim 7, further comprising calculation means for terminating the calculation of the optimum gain for said light receiving means in synchronization with the termination of irradiation by said irradiation means.

11. An ophthalmic apparatus comprising:

illumination means for illuminating an eye fundus area including a specified target region;

10 detection means for detecting light from said specified region;

tracking means for tracking the movement of the eye fundus, utilizing the detection signal of said detection means;

15 tracking start input means for providing an input signal for starting the tracking of said tracking means;

gain determination means for determining the amplification gain of said detection means; and

20 control means for executing in succession a first step of causing, in response to the input signal of said tracking start input means, said gain determination means to determine the gain of said detection means, and a second step of starting the

25 tracking by said tracking means with the gain determined by said first step.

12. An ophthalmic apparatus according to claim

11, wherein said detection means is image taking means for taking the image of said specified region thereby outputting an image signal.

5 13. An ophthalmic apparatus according to claim 11, wherein said tracking is executed by deflecting the illuminating light of said illumination means.

10 14. An ophthalmic apparatus according to claim 11, wherein said specified region is a vessel on the eye fundus.

15 15. An ophthalmic apparatus according to claim 11, wherein the amount of illuminating light of said illumination means is different between before the start of said tracking and during the execution of said tracking, and the gain of said detection means is determined in consideration of the amount of illuminating light during the execution of said
20 tracking.

 16. An ophthalmic apparatus comprising:
illumination means for illuminating an eye fundus area including a specified target region;
25 image taking means for taking the image of said specified region thereby outputting an image signal;
process condition determination means for determining a process condition based on a signal in

the vicinity of said specified region, contained in the output signal of said image taking means or in the result obtained by processing said output signal;

region extraction means for extracting said
5 specified region according to said process condition determination means; and

auto tracking means for executing automatic tracking of said specified region, based on the output of said region extraction means.

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17. An ophthalmic apparatus according to claim 16, wherein the signal of said specified region indicates a vessel image, and said process condition determination means is adapted to extract the signal of
15 said vessel image portion only and to execute a normalization process for varying the gain according to the signal of said vessel image portion.

18. An ophthalmic apparatus according to claim
20 17, wherein said process condition determination means includes normalizing range setting means for setting an effective range of the normalization process for varying the gain, according to the signal of said vessel image portion.

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19. An ophthalmic apparatus according to claim 18, wherein said process condition determination means includes normalizing range varying means for varying an

effective range of the normalization process for varying the gain, according to the signal of said vessel image portion.

5 20. An ophthalmic apparatus according to claim 19, wherein said normalizing range varying means is adapted to vary the effective range of the normalization process according to the diameter of said vessel image.

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21. An ophthalmic apparatus according to claim 17, wherein, in said normalization process, the gain is varied from a predetermined period after the start of automatic tracking, and is thereafter maintained
15 constant.

22. An ophthalmic inspecting apparatus comprising:

illumination means for illuminating an eye fundus
20 area including a specified target region;

image taking means for taking the image of said specified region thereby outputting an image signal;

process condition determination means for
determining a process condition based on a signal in
25 the vicinity of said specified region, contained in the output signal of said image taking means or in the result obtained by processing said output signal;

region extraction means for extracting said

specified region according to said process condition determination means;

display means for displaying the result of processing by said process condition determination

5 means; and

auto tracking means for executing automatic tracking of said specified region, based on the output of said region extraction means.

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